SEQ ID NO: 2

<!--StartFragment-->RESULT 1
AAG79755
ID AAG79755 standard; protein; 490 AA.
XX
AC AAG79755;
XX
DT 01-APR-2003 (first entry)
XX
DE Human hydroxylase #1.
XX
KW Hydroxylase; tryptophan hydroxylase; gene therapy; enzyme;
KW gene regulation; depression; anxiety; immune disorder;
KW Alzheimer's disease; epilepsy; Parkinson's disease.
XX
OS Homo sapiens.
XX
PN WO200297039-A2.
XX
PD 05-DEC-2002.
XX
PF 23-MAY-2002; 2002WO-US016635.
XX
PR 29-MAY-2001; 2001US-0294076P.
XX
PA (LEXI-) LEXICON GENETICS INC.
XX
PI Yu X, Miranda M, Hu Y;
XX
DR WPI; 2003-140457/13.
DR N-PSDB; ABA00787.
XX
PT Novel human proteins and polynucleotides that share sequence similarity
PT with mammalian hydroxylases useful in industrial, therapeutic, diagnostic
PT and pharmacogenomic applications.
XX
PS Claim 9; Page 39-40; 45pp; English.
XX
CC The sequences given in AAG79755-58 represent human hydroxylases,
CC particularly tryptophan hydroxylases. The novel human protein (NHP)
CC sequences are useful to identify mutations associated with a particular
CC disease and also as a diagnostic or prognostic assay, and also in the
CC molecular mutagenesis/evolution of proteins that are at least partially
CC encoded by the NHP sequences. Sequences derived from regions adjacent to
CC the intron/exon boundaries of NHP gene can be used to design primers for
CC use in amplification assays to detect mutations within the exons, splice
CC sites, introns that can be used in diagnostics and pharmacogenomics. NHP
CC sequences are utilized in microarrays or other assay formats, to screen
CC collections of genetic material from patients who have a particular
CC medical condition. NHP nucleotide sequences are useful for drug screening
CC effective in the treatment of symptomatic or phenotypic manifestations of
CC perturbing the normal function of NHP in the body, and nucleotide
CC constructs encoding NHP products are used to genetically engineer host
CC cells to express NHP products in vivo. These genetically engineered cells
CC function as bioreactors in the body delivering a continuous supply of a
CC NHP, a NHP peptide, or a NHP fusion protein to the body. Nucleotide
CC construct encoding NHP products are also useful in gene therapy for
CC modulating NHP expression and to produce genetically engineered host
CC cells to express NHP products in vivo. NHP nucleotide sequences may also
CC be used as part of ribozyme and/or triple helix sequences that are useful
CC for NHP gene regulation. The encoded NHP polypeptides are useful for
CC generating antibodies, as reagents in diagnostic assays, for identifying

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CC   other cellular gene products related to NHP and as reagents in assays for
CC   screening for compounds that are useful in the treatment of mental,
CC   biological or medical disorders and diseases. NHPs can be used in drug
CC   screening assays to identify compounds for treating diseases such as for
CC   e.g. depression, anxiety, immune disorders, Alzheimer's disease, epilepsy
CC   and Parkinson's disease
XX
SQ   Sequence 490 AA;

  Query Match             100.0%;  Score 2584;  DB 6;  Length 490;
  Best Local Similarity   100.0%;  Pred. No. 6.9e-248;
  Matches  490;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MQPAMMMFSSKYWARRGFSLDSAVPEEHQLLGSSTLNKPNSGKNDDKGNKGSSKREAATE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MQPAMMMFSSKYWARRGFSLDSAVPEEHQLLGSSTLNKPNSGKNDDKGNKGSSKREAATE 60

Qy         61 SGKTAVVFSLKNEVGGLVKALRLFQEKRVNMVHIESRKSRRRSSEVEIFVDCECGKTEFN 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 SGKTAVVFSLKNEVGGLVKALRLFQEKRVNMVHIESRKSRRRSSEVEIFVDCECGKTEFN 120

Qy        121 ELIQLLKFQTTIVTLNPPENIWTEEEELEDVPWFPRKISELDKCSHRVLMYGSELDADHP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 ELIQLLKFQTTIVTLNPPENIWTEEEELEDVPWFPRKISELDKCSHRVLMYGSELDADHP 180

Qy        181 GFKDNVYRQRRKYFVDVAMGYKYGQPIPRVEYTEEETKTWGVVFRELSKLYPTHACREYL 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GFKDNVYRQRRKYFVDVAMGYKYGQPIPRVEYTEEETKTWGVVFRELSKLYPTHACREYL 240

Qy        241 KNFPLLTKYCGYREDNVPQLEDVSMFLKERSGFTVRPVAGYLSPRDFLAGLAYRVFHCTQ 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 KNFPLLTKYCGYREDNVPQLEDVSMFLKERSGFTVRPVAGYLSPRDFLAGLAYRVFHCTQ 300

Qy        301 YIRHGSDPLYTPEPDTCHELLGHVPLLADPKFAQFSQEIGLASLGASDEDVQKLATCYFF 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 YIRHGSDPLYTPEPDTCHELLGHVPLLADPKFAQFSQEIGLASLGASDEDVQKLATCYFF 360

Qy        361 TIEFGLCKQEGQLRAYGAGLLSSIGELKHALSDKACVKAFDPKTTCLQECLITTFQEAYF 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 TIEFGLCKQEGQLRAYGAGLLSSIGELKHALSDKACVKAFDPKTTCLQECLITTFQEAYF 420

Qy        421 VSESFEEAKEKMRDFAKSITRPFSVYFNPYTQSIEILKDTRSIENVVQDLRSDLNTVCDA 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VSESFEEAKEKMRDFAKSITRPFSVYFNPYTQSIEILKDTRSIENVVQDLRSDLNTVCDA 480

Qy        481 LNKMNQYLGI 490
              ||||||||||
Db        481 LNKMNQYLGI 490

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